

HAWAII ADMINISTRATIVE RULES

TITLE 11

DEPARTMENT OF HEALTH

CHAPTER 273.1

HAZARDOUS WASTE MANAGEMENT:  
STANDARDS FOR UNIVERSAL WASTE MANAGEMENT

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Historical note: This chapter is based  
substantially upon chapter 11-273. [Eff 6/18/94; am  
3/13/99; comp 9/20/99; R 7/17/17]

**§11-273.1-1 Incorporation of 40 C.F.R. part 273.**

Title 40, part 273 of the Code of Federal Regulations (C.F.R.), published by the Office of the Federal Register, as amended as of July 1, 2022, is made a part of this chapter subject to the substitutions and amendments set forth in sections 11-273.1-2 to 11-273.1-9. [Eff 7/17/17; am and comp 9/30/18; am and comp 6/25/20; am and comp 6/7/21; am and comp

JAN 29 2024 ] (Auth: HRS §§342J-4, 342J-31, 342J-32, 342J-33, 342J-35) (Imp: HRS §§342J-4, 342J-31, 342J-32, 342J-33, 342J-35)

**§11-273.1-2 Substitution of state terms and citations for federal terms and citations.** (a) The following federal terms are replaced by the indicated state terms in all provisions of 40 C.F.R. part 273, as incorporated and amended in this chapter, except as listed in subsection (b):

- (1) "Administrator", "Assistant Administrator", "Assistant Administrator for Solid Waste and Emergency Response", "EPA Administrator", "EPA Regional Administrator", "Regional Administrator", and "State Director" shall be replaced with "director".
- (2) "Agency", "appropriate regional EPA office", "Environmental Protection Agency", "EPA", "EPA Headquarters", "EPA regional office", "EPA Regions", "U.S. Environmental Protection Agency", and "United States Environmental Protection Agency" shall be replaced with "state department of health" except in references to "EPA Acknowledgment of Consent", "EPA form(s)", "EPA guidance", "EPA hazardous waste numbers(s)", "EPA ID number", "EPA identification number(s)", "EPA manual(s)", "EPA publication(s)", and "EPA test methods".

(b) The federal terms listed in subsection (a) are not replaced with state terms in the following sections of 40 C.F.R. part 273, as incorporated and

amended in this chapter: 40 C.F.R. sections 273.32(a)(3) and 273.52(a).

(c) All references to provisions of 40 C.F.R. parts 124, 260 to 268, 270, 273, and 279 in 40 C.F.R. part 273, as incorporated and amended in this chapter, shall mean the Hawaii Administrative Rules analog of the referenced federal regulation, as incorporated and amended in chapters 11-260.1 to 11-279.1, except as listed in subsection (d). The Hawaii Administrative Rules analogs are as follows:

<u>Federal citation</u>	<u>State analog</u>
<u>40 C.F.R. part</u>	<u>chapter 11-</u>
124	271.1
260	260.1
261	261.1
262	262.1
263	263.1
264	264.1
265	265.1
266	266.1
268	268.1
270	270.1
273	273.1
279	279.1

(d) The following references to provisions of 40 C.F.R. parts 124, 260 to 268, 270, 273, and 279 in 40 C.F.R. part 273, as incorporated and amended in this chapter, refer to the federal regulations in the Code of Federal Regulations: references in 40 C.F.R. section 273.52. [Eff 7/17/17; comp 9/30/18; am and comp 6/25/20; am and comp 6/7/21; comp JAN 29 2024 ] (Auth: HRS §§342J-4, 342J-31, 342J-32, 342J-33, 342J-35) (Imp: HRS §§342J-4, 342J-31, 342J-32, 342J-33, 342J-35)

**§11-273.1-3 Amendments to the incorporation of 40 C.F.R. part 273, subpart A. (a) The incorporation**

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by reference of 40 C.F.R. section 273.1 is amended as follows:

- (1) In 40 C.F.R. section 273.1(a)(4), delete "and".
- (2) In 40 C.F.R. section 273.1(a)(5), replace the period at the end of the paragraph with a semicolon.
- (3) In 40 C.F.R. section 273.1(a), add a paragraph (6) to read: "(6) Electronic items as described in 40 C.F.R. section 273.6.1, as incorporated and amended in this chapter; and".
- (4) In 40 C.F.R. section 273.1(a), add a paragraph (7) to read: "(7) Solar panels as described in 40 C.F.R. section 273.6.2, as incorporated and amended in this chapter."
- (5) In 40 C.F.R. section 273.1(b), replace "40 CFR parts 260 through 272" with "chapters 11-260.1 to 11-270.1".

(b) The incorporation by reference of 40 C.F.R. section 273.2 is amended as follows: in section 273.2(a)(2) and (b)(1), replace "40 CFR part 266, subpart G" with "40 C.F.R. section 266.80(b) to (e), as incorporated and amended in section 11-266.1-1".

(c) The incorporation by reference of 40 C.F.R. section 273.3 is amended as follows: in section 273.3(b)(2), replace "40 CFR parts 260 through 272" with "chapters 11-260.1 to 11-270.1".

(d) The incorporation by reference of 40 C.F.R. part 273 is amended by adding a new section, 40 C.F.R. section 273.6.1, to read:

"§273.6.1 Applicability—Electronic items.

- (a) Electronic items covered under chapter 11-273.1. The requirements of this chapter apply to persons managing electronic items, as described in 40 C.F.R. section 273.9, as incorporated and amended in this chapter, except those listed in paragraph (b) of this section.
- (b) Electronic items not covered under chapter 11-273.1. The requirements of this chapter

do not apply to persons managing the following electronic items:

- (1) Electronic items that are not yet wastes under chapter 11-261.1. A universal waste handler who claims that an electronic item is not a waste must manage that item as a product and bears the burden of demonstrating that there is a known market or disposition for its re-use as an electronic item.
- (2) Electronic items that were previously identified as wastes under chapter 11-261.1 but are no longer identified as wastes (e.g., a discarded electronic item that is refurbished and is returned to service).
- (3) Electronic items that do not exhibit a toxicity characteristic of a hazardous waste as set forth in chapter 11-261.1 and that are not otherwise identified as hazardous waste pursuant to chapter 11-261.1. A universal waste handler who claims that a waste electronic item does not exhibit a toxicity characteristic bears the burden of demonstrating that the electronic item is not a hazardous waste. Assume all waste electronic items to be hazardous unless you evaluate and can document that they are non-hazardous (e.g., pass the Toxicity Characteristic Leaching Procedure [TCLP] test, as described in 40 C.F.R. sections 260.11 and 261.24 and incorporated by reference in chapters 11-260.1 and 11-261.1, and are not otherwise identified as hazardous waste pursuant to chapter 11-261.1)."

(e) The incorporation by reference of 40 C.F.R. part 273 is amended by adding a new section, 40 C.F.R. section 273.6.2, to read:

"§273.6.2 Applicability—Solar panels.

- (a) Solar panels covered under chapter 11-273.1. The requirements of this chapter apply to persons managing solar panels, as

described in 40 C.F.R. section 273.9, as incorporated and amended in this chapter, except those listed in paragraphs (b) and (c) of this section.

- (b) Solar panels not covered under chapter 11-273.1. The requirements of this chapter do not apply to persons managing the following solar panels:
- (1) Solar panels that are not yet wastes under chapter 11-261.1. Paragraph (d) of this section describes when a solar panel becomes a waste. A universal waste handler who claims that a solar panel is not a waste must manage that item as a product and bears the burden of demonstrating that there is a known market or disposition for its re-use as a solar panel.
  - (2) Solar panels that were previously identified as wastes under chapter 11-261.1 but are no longer identified as wastes (e.g., a discarded solar panel that is refurbished and is returned to service).
  - (3) Solar panels that do not exhibit a toxicity characteristic of a hazardous waste as set forth in chapter 11-261.1 and that are not otherwise identified as hazardous waste pursuant to chapter 11-261.1. A universal waste handler who claims that a waste solar panel does not exhibit a toxicity characteristic bears the burden of demonstrating that the solar panel is not a hazardous waste.
  - (4) Solar panels that exhibit any characteristic of a hazardous waste other than the characteristic of toxicity. Such solar panels must be managed as hazardous waste pursuant to chapters 11-260.1 to 11-270.1.

- (5) Solar panels that are recycled in a manner constituting disposal, as described in 40 C.F.R. section 261.2(c)(1), as incorporated and amended in section 11-261.1-1. Such solar panels must be managed as hazardous waste pursuant to chapters 11-260.1 to 11-270.1.
- (c) Solar panels that are integrated into the structure of an electronic item, as defined in 40 C.F.R. section 273.9, as incorporated and amended in this chapter, shall be managed as an electronic item under this chapter.
- (d) Generation of waste solar panels.
  - (1) A used solar panel becomes a waste on the date it is discarded (i.e., when stored while destined for reclamation).
  - (2) An unused solar panel becomes a waste on the date the handler decides to discard it."
- (f) The incorporation by reference of 40 C.F.R. section 273.9 is amended as follows:
  - (1) The following definitions are amended as follows:
    - "Destination facility" definition. Delete both instances of "(a) and (c)".
    - "Large quantity handler of universal waste" definition. Replace "or aerosol cans," with "aerosol cans, electronic items, or solar panels,".
    - "Small quantity handler of universal waste" definition. Replace "or aerosol cans," with "aerosol cans, electronic items, or solar panels,".
    - "Universal waste" definition. Replace "; and" with ";" and replace the period at the end of the definition with "; (6) Electronic items as described in 40 C.F.R. section 273.6.1, as incorporated and amended in this chapter; and (7) Solar panels as

described in 40 C.F.R. section 273.6.2, as incorporated and amended in this chapter.”.

“Universal waste handler” definition.

Replace “A person who treats (except under the provisions of § 273.13(a) or (c), or §273.33(a) or (c)), disposes of, or recycles (except under the provisions of § 273.13(e) or § 273.33(e)) universal waste;” with “A person who treats, disposes of, or recycles universal waste (except under the provisions of 40 C.F.R. section 273.13 or 273.33, as incorporated and amended in this chapter);”.

- (2) Add the following additional definitions in alphabetical order:

“Circuit board” means the part of an electronic device that mechanically supports and electrically connects electronic components (such as capacitors, diodes, power sources, resistors, sensors, switches, transducers, transistors, etc.) using conductive tracks.

“Electronic item”, also referred to as “universal waste electronic item”, means a device containing a circuit board, or other complex circuitry, or a video display. Indicators that a device likely contains a circuit board include the presence of a keypad, touch screen, any type of video or digital display, or common electronic ports or connectors, such as serial, parallel, Rj45 (“network”), or USB. Examples of common universal waste electronic items include, but are not limited to: computer central processing unit; computer monitor; portable computer (including notebook, laptop, and tablet computer); devices designed for use with computers (also known as computer peripherals) such as keyboard, mouse, desktop printer, scanner, and external storage drive; server; television; digital video disc (DVD) recorder or player; videocassette recorder or player (VCR);



eBook reader; digital picture frame; fax machine; video game equipment; cellular telephone; answering machine; digital camera; portable music or video player; wireless paging device; remote control; and smoke detector. Electronic item does not include a device that is physically a part of, connected to, or integrated within a large piece of equipment that is not meant to be hand-carried by one person (for example, an automobile, large medical equipment, or white goods as defined in chapter 11-58.1). A device is considered physically a part of, connected to, or integrated within a large piece of equipment if the device cannot be easily disconnected from the large equipment by a layperson without specialized training. When a device containing a circuit board or a video display is removed, separated, or separate from the large piece of equipment that it is meant to be a part of, it is a universal waste electronic item.

"Photovoltaic cell" means a specialized semiconductor diode designed to convert solar radiation into electrical energy. Photovoltaic cells may be composed of, but are not limited to, monocrystalline silicon, polycrystalline silicon, amorphous silicon, cadmium telluride, copper indium gallium selenide, and gallium indium phosphide/gallium arsenide/gallium, and perovskite. Photovoltaic cells are managed as solar panels.

"Solar panel" or "solar photovoltaic panel" means a device consisting of one or more electrically connected photovoltaic cells that are designed to convert solar radiation into electrical energy. Solar panel includes integrated components that cannot be separated without breaking the solar panel glass. Examples of integrated

components include, but are not limited to, protective glass, conductive metal contact, metal framing the photovoltaic cells, housing or pocket holding the photovoltaic cells, and top and back layer. Photovoltaic cells that are not electrically connected are managed as solar panels. Solar panel does not include solar thermal panels that do not contain photovoltaic cells.

"Solar photovoltaic system" means a set of components consisting of one or more solar panels and ancillary components such as, but not limited to, metal frames used to support the solar panels, connectors, junction boxes, batteries, inverters, wires, and cables that are connected to the solar panels. Ancillary components are those components of the system that can be manually separated from the solar panel without breaking the solar panel glass.

"Video display" means the part of an electronic device capable of presenting images electronically on a screen viewable by the device user. A video display may use cathode ray tube, liquid crystal display (LCD), gas plasma, digital light processing, or other image projection technology. [Eff 7/17/17; am and comp 9/30/18; comp 6/25/20; am and comp 6/7/21; comp JAN 29 2024 ]  
(Auth: HRS §§342J-4, 342J-31, 342J-32, 342J-33, 342J-35) (Imp: HRS §§342J-4, 342J-31, 342J-32, 342J-33, 342J-35)

**§11-273.1-4 Amendments to the incorporation of 40 C.F.R. part 273, subpart B.** (a) The incorporation by reference of 40 C.F.R. section 273.13 is amended as follows:

- (1) In 40 C.F.R section 273.13(a)(3)(i), (c)(2)(iii), (c)(2)(iv), (c)(4)(ii), and

- (e) (4) (v), replace "40 CFR parts 260 through 272" with "chapters 11-260.1 to 11-270.1".
- (2) In 40 C.F.R. section 273.13(e) (4) (vi), replace "or" with "and".
- (3) Add a subsection (f) to read: "(f) Electronic items. A small quantity handler of universal waste must manage electronic items in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:
- (1) Electronic items shall be stored in
- (i) A building, with a permanent roof and floor, that is constructed and maintained to minimize breakage of electronic items and to prevent exposure of the electronic items to precipitation; or
- (ii) A closed and secure container that is constructed and maintained to minimize breakage of electronic items and to prevent exposure of the electronic items to precipitation.
- (2) All universal waste electronic items must be stored in a building or container meeting the requirements of paragraph (1) within 24 hours of being discarded.
- (3) A small quantity handler of universal waste shall immediately clean up and place in a container any universal waste electronic item that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions. The container shall be closed, structurally sound, and compatible with the contents of the electronic item, and shall lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

- (4) A small quantity handler of universal waste may conduct the following activities:
  - (i) Sorting electronic items by type;
  - (ii) Mixing electronic item types in one container;
  - (iii) Removal of discrete components that are typically removed by consumers for replacement during the normal operation of an electronic item (e.g., battery packs, hard drives, solid state drives). A universal waste handler shall conduct the removal of the discrete components in the manner that is prescribed in the operating manual for the electronic item, or in a manner that would otherwise reasonably be employed during the normal operation of the electronic item; and
  - (iv) Removal of separable non-electronic pieces that are intended for assembly by retailers or consumers (e.g., monitor saucer, wall hanging bracket, cell phone case).
- (5) A small quantity handler who generates other solid waste (e.g., battery packs, monitor saucers) as a result of the activities listed in paragraph (4) shall make a hazardous waste determination pursuant to 40 C.F.R. section 262.11, as incorporated and amended in section 11-262.1-1.
  - (i) If the waste exhibits a characteristic of hazardous waste, it is subject to all applicable requirements of chapters 11-260.1 to 11-270.1. If the waste is another type of universal waste

- (e.g., a battery), it may be alternatively managed under this chapter. The handler is considered the generator of the waste and is subject to chapter 11-262.1.
- (ii) If the waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state, and local solid waste regulations.
- (6) A small quantity handler of universal waste who drills holes in or crushes hard drives, solid state drives, or similar electronic storage media for the purpose of meeting data security standards or media sanitization standards must meet the following requirements:
- (i) Establish and follow a written procedure detailing how to safely drill holes in or crush the electronic storage media (including proper assembly, operation, and maintenance of the drilling or crushing device and proper waste management practices to prevent releases); maintain a copy of the written procedure on site; and ensure employees conducting drilling or crushing are trained in the proper procedure;
  - (ii) Conduct drilling or crushing over a catchment area or container and immediately collect and containerize any debris generated during the procedure;
  - (iii) Ensure that all debris and electronic storage media are confined to a container that:
    - (A) Is structurally sound;

- (B) Is compatible with the contents of the waste;
  - (C) Lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions; and
  - (D) Remains closed except when drilling, crushing, or adding waste; and
- (iv) Manage the resulting debris and electronic storage media as universal waste electronic items."
- (4) Add a subsection (g) to read:
- "(g) Solar panels. A small quantity handler of universal waste must manage solar panels in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:
- (1) Solar panels shall be stored in a manner that prevents breakage and release of any constituent of a solar panel to the environment under reasonably foreseeable conditions. A container or other method of storage (e.g., stretch-film wrapped panels on a pallet) used must prevent breakage, leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions. Intact solar panels need not be contained to meet this standard.
  - (2) A small quantity handler of universal waste shall immediately clean up and place in a container any universal waste solar panel that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions. The container shall be closed, structurally sound, and compatible with the contents of

the solar panel, and shall lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

- (3) A small quantity handler of universal waste may conduct the following activities:
  - (i) Sorting solar panels by type;
  - (ii) Mixing solar panel types in one container, on one pallet, or in one demarcated storage area;
  - (iii) Removal of ancillary components that are typically removed for replacement during the normal operation and maintenance of a solar photovoltaic system (e.g., connectors, junction boxes, batteries, inverters). A universal waste handler shall conduct the removal of the ancillary components in the manner that is prescribed in the operating manual for the solar photovoltaic system, or in a manner that would otherwise reasonably be employed during the normal operation and maintenance of the solar photovoltaic system; and
  - (iv) Manual or mechanical separation of framing from solar panel glass, provided the following conditions are met:
    - (A) All reasonable efforts shall be made to minimize breakage of solar panel glass;
    - (B) Solar panels with framing removed shall be stored in a horizontal stack and shall be stretch-film wrapped as soon as practicable or at the end of each work shift;

- (C) Solar panels with framing removed shall be stored in:
    - (1) A building, with a permanent roof and floor, that is constructed and maintained to minimize breakage of solar panels and to prevent exposure of the solar panels to precipitation; or
    - (2) A closed and secure container that is constructed and maintained to minimize breakage of solar panels and to prevent exposure of the solar panels to precipitation;
  - (D) Separated metal framing is recycled; and
  - (E) Broken pieces of solar panel glass shall be cleaned up and placed in a container at the end of each work shift during which framing is removed from solar panels. The container shall be closed, structurally sound, and compatible with the contents of the solar panel, and shall lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions. These pieces must be managed as universal waste.
- (4) A small quantity handler who generates other solid waste (e.g., batteries, inverters) as a result of the activities listed in paragraph (3)



shall make a hazardous waste determination pursuant to 40 C.F.R. section 262.11, as incorporated and amended in section 11-262.1-1.

- (i) If the waste exhibits a characteristic of hazardous waste, it is subject to all applicable requirements of chapters 11-260.1 to 11-270.1.
  - (ii) If the waste is another type of universal waste (e.g., a battery, an electronic item), it may be alternatively managed under this chapter. The handler is considered the generator of the waste and is subject to applicable requirements of chapter 11-262.1 and this chapter.
  - (iii) If the waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state, and local solid waste regulations, except as provided in paragraph (g)(3)(iv)(D) of this section."
- (b) The incorporation by reference of 40 C.F.R. section 273.14 is amended as follows:
- (1) In 40 C.F.R. section 273.14(a), replace "Universal waste batteries (i.e., each battery), or a container in which the batteries are contained," with "Each battery, container or pallet containing universal waste batteries, or designated universal waste battery storage area demarcated by boundaries".
  - (2) In 40 C.F.R. section 273.14, add a subsection (g) to read: "(g) Each electronic item, container or pallet containing universal waste electronic items, or designated universal waste electronic item storage area demarcated by boundaries must be labeled or marked clearly with one of the

following phrases: "Universal Waste-electronic item(s)", or "Waste electronic item(s)", or "Used electronic item(s)"."

- (3) In 40 C.F.R. section 273.14, add a subsection (h) to read: "(h) Each solar panel, container or pallet containing solar panels, or designated universal waste solar panel storage area demarcated by boundaries, must be labeled or marked clearly with one of the following phrases: "Universal Waste-solar panel(s)", or "Waste solar panel(s)", or "Used solar panel(s)"."

(c) The incorporation by reference of 40 C.F.R. section 273.17 is amended as follows: in 40 C.F.R. section 273.17(b), replace "40 CFR parts 260 through 272" with "chapters 11-260.1 to 11-270.1". [Eff 7/17/17; comp 9/30/18; am and comp 6/25/20; am and comp 6/7/21; am and comp <sup>JAN 29 2024</sup> ] (Auth: HRS §§342J-4, 342J-31, 342J-32, 342J-33, 342J-35) (Imp: HRS §§342J-4, 342J-31, 342J-32, 342J-33, 342J-35)

**§11-273.1-5 Amendments to the incorporation of 40 C.F.R. part 273, subpart C.** (a) The incorporation by reference of 40 C.F.R. section 273.32 is amended as follows: replace 40 C.F.R. section 273.32(b) in its entirety to read: "(b) This notification must include a completed EPA Form 8700-12. To obtain EPA Form 8700-12, call the department at (808) 586-4226."

(b) The incorporation by reference of 40 C.F.R. section 273.33 is amended as follows:

- (1) In 40 C.F.R. section 273.33(a)(3)(i), (c)(2)(iii), (c)(2)(iv), (c)(4)(ii), and (e)(4)(v), replace "40 CFR parts 260 through 272" with "chapters 11-260.1 to 11-270.1".
- (2) In 40 C.F.R. section 273.33(e)(4)(vi), replace "or" with "and".
- (3) Add a subsection (f) to read: "(f) Electronic items. A large quantity handler of universal waste must manage electronic

items in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

- (1) Electronic items shall be stored in:
  - (i) A building, with a permanent roof and floor, that is constructed and maintained to minimize breakage of electronic items and to prevent exposure of the electronic items to precipitation; or
  - (ii) A closed and secure container that is constructed and maintained to minimize breakage of electronic items and to prevent exposure of the electronic items to precipitation.
- (2) All universal waste electronic items must be stored in a building or container meeting the requirements of paragraph (1) within 24 hours of being discarded.
- (3) A large quantity handler of universal waste shall immediately clean up and place in a container any universal waste electronic item that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions. The container shall be closed, structurally sound, and compatible with the contents of the electronic item, and shall lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.
- (4) A large quantity handler of universal waste may conduct the following activities:
  - (i) Sorting electronic items by type;
  - (ii) Mixing electronic item types in one container;
  - (iii) Removal of discrete components that are typically removed by

consumers for replacement during the normal operation of an electronic item (e.g., battery packs, hard drives, solid state drives). A universal waste handler shall conduct the removal of the discrete components in the manner that is prescribed in the operating manual for the electronic item, or in a manner that would otherwise reasonably be employed during the normal operation of the electronic item; and

- (iv) Removal of separable non-electronic pieces that are intended for assembly by retailers or consumers (e.g., monitor saucer, wall hanging bracket, cell phone case).
- (5) A large quantity handler who generates other solid waste (e.g., battery packs, monitor saucers) as a result of the activities listed in paragraph (4) shall make a hazardous waste determination pursuant to 40 C.F.R. section 262.11, as incorporated and amended in section 11-262.1-1.
  - (i) If the waste exhibits a characteristic of hazardous waste, it is subject to all applicable requirements of chapters 11-260.1 to 11-270.1. If the waste is another type of universal waste (e.g., a battery), it may be alternatively managed under this chapter. The handler is considered the generator of the waste and is subject to chapter 11-262.1.
  - (ii) If the waste is not hazardous, the handler may manage the waste in any way that is in compliance with

- applicable federal, state, and local solid waste regulations.
- (6) A large quantity handler of universal waste who drills holes in or crushes hard drives, solid state drives, or similar electronic storage media for the purpose of meeting data security standards or media sanitization standards must meet the following requirements:
- (i) Establish and follow a written procedure detailing how to safely drill holes in or crush the electronic storage media (including proper assembly, operation, and maintenance of the drilling or crushing device and proper waste management practices to prevent releases); maintain a copy of the written procedure on site; and ensure employees conducting drilling or crushing are trained in the proper procedure;
  - (ii) Conduct drilling or crushing over a catchment area or container and immediately collect and containerize any debris generated during the procedure;
  - (iii) Ensure that all debris and electronic storage media are confined to a container that:
    - (A) Is structurally sound;
    - (B) Is compatible with the contents of the waste;
    - (C) Lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions; and

- (D) Remains closed except when drilling, crushing, or adding waste; and
  - (iv) Manage the resulting debris and electronic storage media as universal waste electronic items."
- (4) Add a subsection (g) to read:
- "(g) Solar panels. A large quantity handler of universal waste must manage solar panels in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:
- (1) Solar panels shall be stored in a manner that prevents breakage and release of any constituent of a solar panel to the environment under reasonably foreseeable conditions. A container or other method of storage (e.g., stretch-film wrapped panels on a pallet) used must prevent breakage, leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions. Intact solar panels need not be contained to meet this standard.
  - (2) A large quantity handler of universal waste shall immediately clean up and place in a container any universal waste solar panel that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions. The container shall be closed, structurally sound, and compatible with the contents of the solar panel, and shall lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.
  - (3) A large quantity handler of universal waste may conduct the following activities:

- (i) Sorting solar panels by type;
- (ii) Mixing solar panel types in one container, on one pallet, or in one demarcated storage area;
- (iii) Removal of ancillary components that are typically removed for replacement during the normal operation and maintenance of a solar photovoltaic system (e.g., connectors, junction boxes, batteries, inverters). A universal waste handler shall conduct the removal of the ancillary components in the manner that is prescribed in the operating manual for the solar photovoltaic system, or in a manner that would otherwise reasonably be employed during the normal operation and maintenance of the solar photovoltaic system; and
- (iv) Manual or mechanical separation of framing from solar panel glass, provided the following conditions are met:
  - (A) All reasonable efforts shall be made to minimize breakage of solar panel glass;
  - (B) Solar panels with framing removed shall be stored in a horizontal stack and shall be stretch-film wrapped as soon as practicable or at the end of each work shift;
  - (C) Solar panels with framing removed shall be stored in:
    - (1) A building, with a permanent roof and floor, that is constructed and maintained to minimize breakage of solar panels

- and to prevent exposure of the solar panels to precipitation; or
- (2) A closed and secure container that is constructed and maintained to minimize breakage of solar panels and to prevent exposure of the solar panels to precipitation;
- (D) Separated metal framing is recycled; and
- (E) Broken pieces of solar panel glass shall be cleaned up and placed in a container at the end of each work shift during which framing is removed from solar panels. The container shall be closed, structurally sound, and compatible with the contents of the solar panel, and shall lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions. These pieces must be managed as universal waste.
- (4) A large quantity handler who generates other solid waste (e.g., batteries, inverters) as a result of the activities listed in paragraph (3) shall make a hazardous waste determination pursuant to 40 C.F.R. section 262.11, as incorporated and amended in section 11-262.1-1.
- (i) If the waste exhibits a characteristic of hazardous waste, it is subject to all applicable



requirements of chapters 11-260.1 to 11-270.1.

(ii) If the waste is another type of universal waste (e.g., a battery, an electronic item), it may be alternatively managed under this chapter. The handler is considered the generator of the waste and is subject to applicable requirements of chapter 11-262.1 and this chapter.

(iii) If the waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state, and local solid waste regulations, except as provided in paragraph (g)(3)(iv)(D) of this section."

(c) The incorporation by reference of 40 C.F.R. section 273.34 is amended as follows:

- (1) In 40 C.F.R. section 273.34(a), replace "Universal waste batteries (i.e., each battery), or a container in which the batteries are contained," with "Each battery, container or pallet containing universal waste batteries, or designated universal waste battery storage area demarcated by boundaries".
- (2) In 40 C.F.R. section 273.34, add a subsection (g) to read: "(g) Each electronic item, container or pallet containing universal waste electronic items, or designated universal waste electronic item storage area demarcated by boundaries must be labeled or marked clearly with one of the following phrases: "Universal Waste-electronic item(s)", or "Waste electronic item(s)", or "Used electronic item(s)"."
- (3) In 40 C.F.R. section 273.34, add a subsection (h) to read: "(h) Each solar panel, container or pallet containing solar panels, or designated universal waste solar

panel storage area demarcated by boundaries, must be labeled or marked clearly with one of the following phrases: "Universal Waste-solar panel(s)", or "Waste solar panel(s)", or "Used solar panel(s)"."

(d) The incorporation by reference of 40 C.F.R. section 273.37 is amended as follows: in 40 C.F.R. section 273.37(b), replace "40 CFR parts 260 through 272" with "chapters 11-260.1 to 11-270.1".

(e) The incorporation by reference of 40 C.F.R. section 273.39 is amended as follows: in 40 C.F.R. section 273.39(a)(2) and 273.39(b)(2), replace "thermostats" with "mercury-containing equipment, lamps, electronic items". [Eff 7/17/17; comp 9/30/18; am and comp 6/25/20; am and comp 6/7/21; am and comp  
JAN 29 2024 ] (Auth: HRS §§342J-4, 342J-31, 342J-32, 342J-33, 342J-35) (Imp: HRS §§342J-4, 342J-31, 342J-32, 342J-33, 342J-35)

**§11-273.1-6 Amendments to the incorporation of 40 C.F.R. part 273, subpart D.** (a) The incorporation by reference of 40 C.F.R. section 273.54 is amended as follows: in 40 C.F.R. section 273.54(b), replace "40 CFR parts 260 through 272" with "chapters 11-260.1 to 11-270.1".

(b) The incorporation by reference of 40 C.F.R. part 273 is amended by adding a new section 273.57, to read:

"§273.57 Tracking universal waste shipments.

(a) Records of receipt of shipments. A transporter of universal waste must keep a record of each shipment of universal waste received by the transporter. The record may take the form of a log, invoice, manifest, bill of lading, or other shipping document. The record for each shipment of universal waste received must include the following information:

- (1) The name and address of the originating universal waste handler or foreign shipper from whom the universal waste was sent;
  - (2) The quantity of each type of universal waste received (e.g., batteries, pesticides, mercury-containing equipment, lamps, electronic items); and
  - (3) The date of receipt of the shipment of universal waste.
- (b) Records of delivery of shipments. A transporter of universal waste must keep a record of each shipment of universal waste delivered to other facilities. The record may take the form of a log, invoice, manifest, bill of lading or other shipping document. The record for each shipment of universal waste sent must include the following information:
- (1) The name and address of the universal waste handler, destination facility, or foreign destination to which the universal waste was sent;
  - (2) The quantity of each type of universal waste sent (e.g., batteries, pesticides, mercury-containing equipment, lamps, electronic devices); and
  - (3) The date the shipment of universal waste was delivered to the receiving universal waste handler, destination facility, or foreign destination.
- (c) Record retention.
- (1) A transporter of universal waste must retain the records described in subsection (a) for at least three years from the date of receipt of a shipment of universal waste.
  - (2) A transporter of universal waste must retain the records described in subsection (b) for at least three years from the date of delivery of a shipment of universal waste." [Eff 7/17/17; comp 9/30/18; comp 6/25/20; am and comp 6/7/21; comp JAN 29 2024 ] (Auth: HRS §§342J-4, 342J-31, 342J-32, 342J-33,

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342J-35) (Imp: HRS §§342J-4, 342J-31,  
342J-32, 342J-33, 342J-35)

**§11-273.1-7 Amendments to the incorporation of 40 C.F.R. part 273, subpart E.** (a) The incorporation by reference of 40 C.F.R. section 273.60 is amended as follows: in 40 C.F.R. section 273.60(a), replace "section 3010 of RCRA" with "section 342J-6.5, HRS".

(b) The incorporation by reference of 40 C.F.R. section 273.62 is amended as follows: in 40 C.F.R. section 273.62(a)(2), replace "thermostats" with "mercury-containing equipment, lamps, electronic items". [Eff 7/17/17; comp 9/30/18; comp 6/25/20; comp 6/7/21; comp **JAN 29 2024** ] (Auth: HRS §§342J-4, 342J-31, 342J-32, 342J-33, 342J-35) (Imp: HRS §§342J-4, 342J-31, 342J-32, 342J-33, 342J-35)

**§11-273.1-8 (Reserved).**

**§11-273.1-9 Amendments to the incorporation of 40 C.F.R. part 273, subpart G.** The incorporation by reference of 40 C.F.R. section 273.80 is amended as follows: in 40 C.F.R. section 273.80(d), insert "and hazardous waste electronic nicotine delivery systems" after "pharmaceuticals" and replace "a category" with "categories". [Eff 6/25/20; am and comp 6/7/21; comp **JAN 29 2024** ] (Auth: HRS §§342J-4, 342J-31, 342J-32, 342J-33, 342J-35) (Imp: HRS §§342J-4, 342J-31, 342J-32, 342J-33, 342J-35)

**§11-273.1-10 Imports of universal waste.** (a) In addition to the requirements of 40 C.F.R. section 273.70, as incorporated and amended in this chapter, any person who imports universal waste from a foreign

country into the State must submit the following information in writing to the director within thirty days after the waste has arrived in the State:

- (1) The date the waste arrived in the State; and
- (2) The disposition of the waste, i.e., storage, treatment, recycling, or disposal.

(b) Any person who imports universal waste from any state into the State must submit the following information in writing to the director within thirty days after the waste has arrived in the State:

- (1) The date the waste arrived in the State; and
- (2) The disposition of the waste, i.e., storage, treatment, recycling, or disposal.

(c) The requirements of subsections (a) and (b) shall not apply if:

- (1) The waste does not stay in the State for more than ten days; and
- (2) A generator with an EPA identification number does not assume the generator status for the waste. [Eff 7/17/17; comp 9/30/18; comp 6/25/20; comp 6/7/21; comp JAN 29 2024 ] (Auth: HRS §§342J-4, 342J-31, 342J-32, 342J-33, 342J-35) (Imp: HRS §§342J-4, 342J-31, 342J-32, 342J-33, 342J-35)